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GLENN C. WILLIAMS
Associate Professor of Chemical Engineering;

and CHARLES N. SATTERFIELD
Assistant Professor of Chemical Engineering; all at the Massachusetts Institute of Technology

Thermodynamic Charts for Combustion Processes meets today's need for a more exact thermodynamic description of fuels.

The book is printed in two parts, each of which is sold separately. The first contains a review of the principles of cycle calculation, plus a series of full page thermodynamic charts covering all mixtures of carbon, hydrogen, oxygen, and nitrogen.

April 1949 75 pages $2.60

The second part contains eight large charts which map the thermodynamic characteristics of certain hydrocarbon-fuel-air combinations in detail. These charts enable one to treat quantitatively any cycle falling within the range of the variables covered. Part II also contains a set of tables giving the thermodynamic properties and equilibrium gas compositions for 80 fuel mixtures.

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"The Voice of the Engineer"

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M. E. McIVER, Editor

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Believe In Union?

I strongly adhere to the belief that there is Strength in Union, not only for individuals, but for peoples and nations.

The Union of the States of our own United States is an example of this and more recently the United Nations organization and now the Atlantic Pact in Europe are trying to attain a better understanding among Nations.

Yes Union is a great word, though when it comes to labor unions, we find some people violently opposed and others just as strongly in favor of them. Engineers may be divided in their opinion of labor unions, but no Engineer can deny the advantage of combined efforts through an organization of their own, to advance their standing.

I often wonder why all of the younger (as well as the older) Engineers do not realize the great benefit of belonging to the A.A.E. which has worked for so many years for the technical and social uplift of all those in this profession.

What is the reason for this?

Perhaps we who are members are to blame for not spreading the good news of this Association to those who are not familiar with its aims and purposes.

Cannot we, the older members, go out and make others acquainted with the A.A.E. and each get one or more to join the Association of Engineers and thus realize that in doing so, it is for the advancement of all of us and we will agree that in "Union there is Strength."

Laguna Beach, California H. A. Westerbrook

Increased Usefulness of Topographic Mapping

By EARNEST A. BAILEY, Member of A.A.E.

RECENT developments in methods and policy by the U. S. Geological Survey have greatly increased the usefulness of the topographic quadrangle mapping by that agency.

It is now possible, as soon as the mapping of any quardangle has reached the stage where color separation drawings have been prepared, for any map user in the Pacific Coast States to obtain from the Pacific Division Office of the U. S. Geological Survey, Federal Building, Sacramento, California, a one color ozalid print from a composite film positive on a scale of 1:24000 (1″ = 2000′).

These large scale prints will be available for all new quadrangles mapped from now on, even to the summit of the Sierras and for desert areas. They will be very close to accurate scale and may be readily joined with adjacent quads when so desired. This will make possible a uniform working scale throughout the West.

For the valley and foothill areas which are to be published in color as 7½′ quadrangles, the one color print (obtainable a few months before the published map will be available) will be printed direct, in a vacuum frame, from the composite film positive made up from the color separation negatives in such a way as to subdue the contour lines and accentuate the streams so that canal lines, for example, may be more readily distinguished from contours on the one color prints. The price of such direct prints will be 40 cents each.

For areas which are to be published only as 15′ quadrangles, a film positive for each of the four 7½′ quadrangles will be made by enlargement from the 15′ composite. For such quadrangles, the charge will be 60 cents per print. This will cover the cost of the film positive enlargement when the demand from various map users reaches a total of 50 prints.

Similar one color 7½′ quad prints may also be obtained from any previously published 15′ quad by enlargement, but in such cases the cost of the enlargement must be paid by the person or agency ordering the prints, because other demands for such older mapped quads are not expected. By appropriate use of color filter, the streams are preserved in the enlargements made from previously published maps.

This service will now make available, with very nearly the same per-

centage of accuracy as the published quads, maps on a scale large enoug to be useful for many engineering and geological studies without the here tofore necessity of photostatic enlargement of the 1 mile per inch pub lished maps, which method, it was proved by checks on enlargements actuall used in engineering work, increased the allowable error of the publishe map by 5 to 10 times due to uneven shrinkage of the wet process papers use

The officials and employees of the U. S. Geological Survey who cooper ated so wholeheartedly in the development of this new service should b congratulated, and they should be given full support of all engineering geological, mining, lumbering, and agricultural organizations, and indus tries in securing adequate funds for the continuance and speeding up o their good service which is a very necessary foundation for many industria and agricultural projects, as well as needed for possible defense.

Chicago

CAN DO IT AGAIN . .

IT WAS an indomitable band of Chicago engineers who, in 1915, launche the first movement in the profession to "cooperate—advance." It wa the group who defied precedent and "prestige" to prove that engineer can unite as well in defense of their economic rights as in support o technical advancement—without violation of any of the principles o professional conduct. They faced derision and intimidation and scor and almost every other other type of discouragement that could be use against idealists and pioneers. There was such fellowship in the grou such consecrated will power, such tireless energy, and such logic tha nothing could stop it. The movement which began in The Boston Oyste House in 1915 swept out in widening circles to encompass the whol country within a period of five years. Engineers everywhere liked the sturdiness, their forthrightness and the fraternalism which was th predominant characteristic of the Chicago Chapter of American Associa tion of Engineers.

This little group was preaching a doctrine new to engineering— urging cooperative action to improve the "social and economic status o engineers." Almost immediately it set up an employment service to alla the hardships caused by long periods of idleness which lay betwee intermittent employment. At the same time, the group worked closel with employers to learn what engineers could do to increase the usefulness and hence their value to employers. As a result of this kin of investigation, the chapter was soon engaged in organizing extensio courses for engineers in English, report writing, public speaking, book

keeping, business law, psychology and political science. It brought civic leaders into the chapters to tell engineers how they might bring their special talent to bear on community problems. The members, fired with almost religious zeal went out like missionaries to start chapters in smaller cities and towns surrounding Chicago. "Degree Teams" from the first chapter conducted initiations and installations in the new units to be sure that everywhere A.A.E. idealism would be accepted, undiluted and unpolluted by unprofessional aims and policies. Soon the group was dreaming of a "20-story A.A.E. building." This was the particular dream of a man who quite literally gave his life for A.A.E.—its first secretary, affectionately, not derisively, dubbed "20-story Kneisel." He towered at least 20-stories above most of the great engineers of his day in his understanding of the profession's shortcomings and his vision of a united profession, occupying its rightful place and carrying its legitimate responsibilities in a technocratic world.

Chicago has a new Chapter, made up of the men who have served A.A.E. devotedly for a great many years, but who have only recently cemented that cooperation in a formal organization. These men have re-instituted the same types of activities that the first A.A.E. Chapter initiated. All their activities emphasize fellowship, fraternalism. Before each regular dinner meeting there is an open forum or social hour. In the meeting they concentrate upon the social and economic problems of engineering which are the legitimate concern of the parent organization. A novel practice, which might well be emulated by other groups, is that which brings three members at each meeting into the limelight for an extemporaneous address of exactly two minutes' duration (by stopwatch) on one of the major professional problems. Every man, on arrival, writes his name on a slip of paper. Three names are drawn. These are the men who get, for that particular evening, practice in what A.A.E. considers an essential art, that of public speaking. Fear of "talking on foot" A.A.E. has always contended has hampered engineers in defending their convictions in departmental and company-wide conferences, and in civic and political gatherings—even when they knew that there were technological bugs in the plans under consideration.

Once more an A.A.E. Chapter in Chicago believes that the Association can and should own a headquarters building. The chapter would like one with a clubroom for A.A.E.'s local units—those in Metropolitan Chicago and in neighboring states, permitting regional meetings. It would like other facilities to make A.A.E. headquarters the symbol of fraternalism in the profession—a place where engineers could unite in efforts to advance the Association's four-point program.

World War II found Chicago engineers and engineering societies so isolated from each other that months were wasted in recruiting those whose talents were quickly needed and in organizing or "mobilizing" the many varieties of technological ability required in this area. The need

of organization should have been apparent without a war. It is not fully met by "councils" or interlocking committees of many regional units of national societies and local groups. Recruited to full strength an A.A.E. chapter, open to engineers of all branches and specialties, in all stages of professional development, registered and unregistered, would be the perfect peacetime unit to facilitate engineering participation in all great civic projects, to guard engineering interests in all situations and against all kinds of unwise legislation and policies, and it would stand ever ready for such a crisis as found us totally unprepared in 1941.

Meetings are held once a month—usually the fourth Friday in the month. The December meeting was held at Sieben's Brewery, and the members thoroughly enjoyed the evening and the "refreshments." Clarence Sieben who arranged and personally conducted the tours through the brewery, proved himself an exceptional host. He is a member of A.S.R.E. and greatly interested in the welfare of the engineer. He is a director of the Chicago Engineering Societies Council, and active in the Council's program.

The January meeting was addressed by Col. Harold R. Kibler, Administrative Assistant to the President of the W. F. Hall Printing Company.

Mr. Kibler took as his subject "Humanics Management," and gave his listeners a great deal to think about. His address was "meaty"—informative, and exceptionally well received.

Charles F. Martin is president of the local group; Peter Loewe, vice-president; Les Clifford, secretary, and David W. Dunning, treasurer. A. W. Hershey, Donald Mackintosh and Patrick J. Lucey, directors.

Professional Engineers in the Chicago area are invited to join A.A.E. and this aggressive local group.

Unity Conference

For some time Engineers Joint Council has been studying suggestions which have been made from various sources as to means by which the engineering organizations of the country could cooperate in increasing the unity of the engineering profession. These studies led to an invitation sent this past summer by Engineers Joint Council to sixteen of the leading engineering societies of the country, suggesting that each society designate a representative to take part in an exploratory meeting to discuss further this very important subject.

This meeting was held on October 20. Representatives of 14 of the 16 societies were present and there was a very full and free discussion of the whole problem.

There was general agreement among the members of the group that some steps looking toward organizing for increased unity of the engineering profession would be desirable. If an organization is to speak for the profession in important public matters and in other questions which affect the profession as a whole, it should have a structure which would enable it to respond to the various services which it may perform. No conclusion was reached as to the form which such structure might take. However, the group felt that the first approach to this subject would best be made through considering methods for closer cooperation between the existing organizations and for modifying, and perhaps grouping, some of these organizations rather than to consider the establishment of an entirely new additional organization.

As a result of the discussion a Planning Committee was appointed from members of the group, charged with the responsibility for preparing statements regarding various alternative plans of achieving this aim and reporting back to the main group. The date of the next meeting of the main group was set tentatively for January 27, 1950.*

The following societies were represented at the October meeting:

American Association of Engineers
American Institute of Chemical Engineers
American Institute of Electrical Engineers
American Institute of Mining and Metallurgical Engineers
American Society of Civil Engineers
American Society for Engineering Education
The American Society of Mechanical Engineers
American Society of Refrigeration Engineers
American Water Works Association
Institute of Aeronautical Sciences
Institute of Radio Engineers
National Society of Professional Engineers
Society of Automotive Engineers
Society of Naval Architects and Marine Engineers

American Society of Heating and Ventilating Engineers and the Illuminating Engineering Society were invited, but were not represented.

American Association of Engineers was represented by James H. Griffin, chief engineer, Board of Transportation of the City of New York, and a past president of A.A.E.

*Postponed until March 31, 1950.

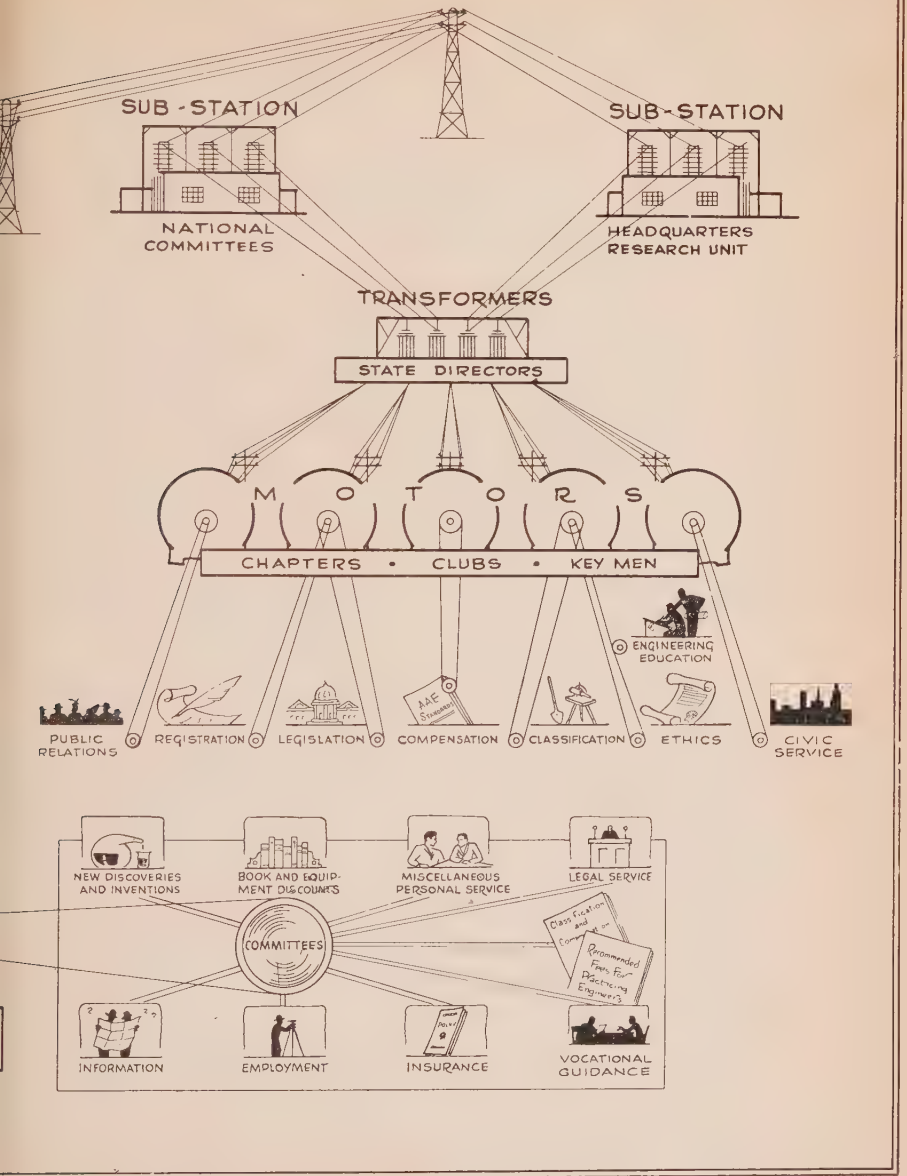
"To promote Unity in the Engineering Profession" always has been a plank in the A.A.E.'s platform, and ever since its inception it has worked toward that end.

Engineers Unite

A National Society concentrates and converts raw energy into usable power capable of being stored and directed.

Never has the Engineering Profession needed so sorely all-inclusive national organization. A.A.E. can sup that need. "Every Member get a Member" is our slog

Power Unlimited



950. Volunteer your services in our campaign. Full
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er power.

ASK A FRIEND TO JOIN A-A-E AND TELL HIM WHY

By Garry H. Ellerman, AAE
Chicago, Illinois

The services to members are varied and manifold as set forth in AAE's fascinating and yet informative brochure delivered to each prospective engineer with and jointly attached to each application for membership.

You may not have this informative knowledge to disseminate among your fellow engineers. However, you surely can explain the meaning of the A.A.E. and of its imperative place in the realm of professional Societies.

It is the only Engineering Society where the personal interest of the individual needs and personal concern of the Engineer as a man and not as a technician is given paramount consideration.

Here is a Society you should belong to, if for no other reason that it is interested in YOU, your personal welfare, earning power, and personality. It is evident from your work that you are a capable Engineer; and you can think, figure, correlate ideas on paper. However, in the final analysis, one must gain recognition, and thus more pay for what you know. Truly, a professional man.

As a Tool Engineer I get much of the value out of my membership and participation in the American Society of Tool Engineers, which deals with subjects in my specific field.

I would urge any Engineer to belong to a Technical Society in his particular line, yet not lose sight of the essential difference between AAE and technical organizations. AAE works for all Engineers—for the individual engineer—and with your help can bring unity within the profession, unity with dignity founded on the adherence to the professional ethics of a high type.

COMPARE the two news stories below. From almost any perspective the world looks a bit screwy today, and the contrast in rewards for high school oratory and engineering research is indicative of a particularly goofy set-up. Scientists would net bigger prizes if they played in a high school league it seems, and better still if they spent their time figuring out the name of the Mystery Tune.

G. H. Hogue, A.A.E. Member in Fresno, California, sent in these two clippings:

Will you invite three engineers to Join A.A.E. in 1950?

If so, ask Headquarters to send you three invitations. Use this coupon.

Name .....

Address .....

City and State .....

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"Denver Scientists Awarded Prize"*

"Last January, one of the highest engineering awards in the country was given to R. F. Blanks, Division Chief, and H. S. Meissner, Head, Basic Concrete Research, Office of the Chief Engineer, Denver, Colorado, for their paper entitled 'Deterioration of Concrete Dams Due to Alkali-Aggregate Reaction,' which was published in Volume III of 'Transactions,' and at the presentation was termed the outstanding paper on construction.

"The highly competitive award was the Thomas Pitch Rowland prize, the third oldest established by the American Society of Civil Engineers, having been instituted by the Society in 1882. The award this year was the sixty-second by the society. The prize consists of $60 in cash (to be divided between the authors), with engraved certificates signed by the president and executive secretary."

"Fresnan Places in Oratorical Contest"*

"Third prize and a $200 cash award yesterday went to Miss Caroline Dunkin of Fresno in competition with other state entries in the California finals of the American Legion sponsored oratorical contest in San Francisco.

"Miss Dunkin, a Fresno High School senior, represented the San Joaquin Valley in the elimination contest by virture of winning over other valley speakers in Bakersfield last Monday, and prior to that had finished first in competition in Fresno February 5th.

"Richard Blades of Huntington Park was awarded the first prize and $500 as well as the right to represent California at the regional elimination contest in Phoenix, Ariz., April 5th. Second prize of $300 went to Jacqueline Geary of San Francisco.

"The Fresnan, who was accompanied to the speech trials by her mother, Mrs. W. C. Dunkin and her high school speech coach, H. B. Cartwright, spoke on 'The Living Constitution.'"

By 24 Experts

ENGINEERING LAMINATES

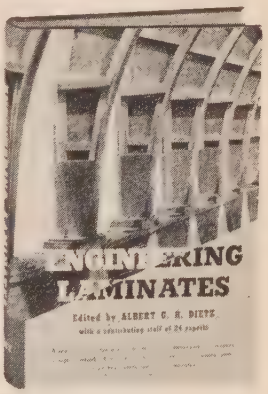
Edited by Albert G. H. Dietz
of the Massachusetts Institute of Technology

Do you know:

1. What laminates are;
2. How they are designed and constructed;
3. What the properties, uses, advantages, and limitations of engineering laminates are?

Learn from this book

The knowledge of 24 specialists has been combined to create the most complete and up-to-date book on the subject—so complete that the necessity of locating isolated sources of information is eliminated. Factual and technical data are stressed, and material is arranged so that you can refer to any particular subject quickly and easily. Future applications, as well as current uses, are treated in detail.



March 1949 797 pages 353 illus.
6 by 9¼ *$10.00*

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8 So. Michigan Ave., Chicago 3, Ill.

Book Reviews

Electrical Transmission of Power and Signals, by Edward Wilson Kimbark, Sc.D., Professor of Electrical Engineering, Northwestern University. Fellow A.I.E.E. John Wiley & Sons, Inc. $6.00.

A very important book since it covers all aspects and applications of transmission-line theory. This book is especially useful to professional engineers as a reference book. Engineers that are engaged in electrical transmission fields cannot afford to be without this book.

Industrial Electricity Volume Two Alternating-Current Practice, by William H. Timbie, Professor Emeritus of Electrical Engineering and Industrial Practice, Massachusetts Institute of Technology, Cambridge, Mass. John Wiley & Sons, Inc. $5.96.

A carefully written book for students and practicing engineers alike. A noteworthy feature is that this book lends itself to home-study. There are 781 pages in this book—a truly monumental work on alternating-current practice. Highly recommended.

Organic Reactions, Volume IV, Editorial Board, Roger Adams, Editor-in-Chief. John Wiley & Sons, Inc. $6.00.

This is the fourth volume of a series which was started in 1942. The book is essentially a compilation of all the important synthetic chemical reactions. Each chapter is written by a man or men who have had special experience with the reaction they are writing about. A must book for chemical libraries.

Personnel Selection Test and Measurement Techniques, by Robert L. Thorndike, Professor of Education, Teachers College, Columbia University. John Wiley & Sons, Inc. $4.00.

The book is made up of two distinct parts. The first eight chapters deal with technical problems involved in developing a personnel testing program and in appraising its effectiveness. The last three deal with administrative problems of maintaining a smooth running program. The treatment of statistical problems has been well carried out. Personnel managers and executives should have this book.

Elements of Aerodynamics of Supersonic Flows, by Antonio Ferri, The Macmillan Company, New York. $10.00.

Written by one of the foremost authorities in this field. The book is the first complete and up-to-date book on the theory and physical phenomena of supersonic flows. The book is outstanding for its clarity and should be a great help to aeronautical engineers.

The Cylinder Wear in Diesel Engines With Special View to Large Marine Units. Chemical Publishing Co., Inc., New York. Author, Carl Hech, M. Inst. N.A. $5.00.

A reference work of great merit for Diesel Engineers. Cylinder Wear is the bane of Diesel Engine operators, therefore if cylinder wear could be lessened the field of applications for Diesel Engines could be greatly expanded. The author has covered his subject well and has included information heretofore not available. An outstanding book.

Magnetic Recording, by S. J. Begun, Vice President and Chief Engineer, The Brush Development Company. Murray Hill Books, Inc., New York. $5.00.

Magnetic recording is coming of age, hence this book should be welcomed by all engineers and others interested in the subject. Chapter VI, "Magnetic Recording Equipment," is alone worth the price of the book, since it describes and illustrates practically all types of equipment in use today.

Higher Algebra for the Undergraduate, by Marie J. Weiss, Professor of Mathematics, Newcomb College, Tulane University. John Wiley & Sons, Inc. $3.75.

A clear, concise textbook covering the subject in a thorough manner. Engineers will find this book useful as a refresher course.

Mines Register, successor to The Mines Handbook and The Copper Handbook, Volume XXIII, 1949. Atlas Publishing Co. $25.00.

The only American register of active mines covering North, South and Central America, Philippines, West Indies and several of the most important companies in other parts of the world. There is a list of inactive mines which should prove very useful. The datum concerning active mines is comprehensive and evidently assembled with great care. There is a list of mining officials, mine managers, superintendents, purchasing agents and mining engineers. Statistical data covering the mining industry is included. A must book for mine owners, managers and engineers.

Heat Transfer, by Max Jakob, Research Professor of Mechanical Engineering, Illinois Institute of Technology. Volume I. John Wiley & Sons, Inc. $12.00.

A most complete treatment of conduction and convection ever assembled in one volume. It covers conduction and convection from every viewpoint. The book is international in scope, German literature being exceptionally well covered. The book should serve the needs of all engineers, it is the long looked for truly indispensable book.

Steel and its Heat Treatment, Volume III, **Engineering and Special-Purpose Steels,** 5th Ed., by D. K. Bullens and the Metallurgical Staff of the Batelle Memorial Institute. John Wiley & Sons, Inc. $7.50.

The fact that this book has reached the fifth edition proves its value. The book covers everything worth knowing about heat treatment of practically all types of steel. The author deserves great credit by having kept the text up-to-date. An important book in every way.

Standards of Hydraulic Institute, 8th Ed., published by Hydraulic Institute, New York. $3.00.

An indispensable book for engineers engaged in the various branches of hydraulic engineering dealing with pumps of all types. The book has for its aim good engineering practice in the pump industry and it accomplishes this purpose in a thorough manner. The Hydraulic Institute merits plaudits for having made this data available.

Modern Timber Engineering, 3rd Ed., by W. Fleming Scofield, Associate Professor of Civil Engineering, University of Alabama, and W. H. O'Brien, Engineer Southern Pine Association. $1.50.

This book contains the latest technical data on timber design as set forth in National Design Specifications, which are now incorporated in many building code standards. A handy book for designers of timber structures.

Elements of Mechanical Vibration, by C. R. Freberg, Head Engineering Research Division, Southern Research Institute and E. N. Kemler, Research Professor of Mechanical Engineering, Assistant Director of Research, College of Engineering, New York University. 2nd Ed. John Wiley & Sons, Inc. $3.75.

This new edition has been enlarged by two new and important chapters: Sound and Beams. Noise and vibration elimination is becoming increasingly important, hence this book fills a real need. A comprehensive bibliography is included.

Structural Design in Metals, by Clifford D. Williams, head Professor of Civil Engineering, University of Florida, and Ernest C. Harris, Chairman, Department of Structural Engineering,

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By Earl Buckingham
Professor of Mechanical Engineering, M. I. T.

546 pages • 6 x 9 • $10.00

WRITTEN by an acknowledged authority in the field, this book covers every phase of the uniform transmission of motion and power by means of gears of all types. It covers the nature of the action—the forms of the teeth—the influence and nature of fraction—the conditions that influence the intensity of dynamic loads—the strength of the gear teeth—and the resistance to wear of various combinations of materials.

IT IS a book that will help you design more effective gears for any purpose. It includes spur and helical gears on parallel shafts, bevel and spiral bevel gears on intersecting shafts, and spiral, worm and hypoid gears on non-parallel and non-intersecting shafts. It provides a complete outline of the fundamental relationships that form the foundation of the design of all types of gears.

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Penn College. The Ronald Press Company, New York. $6.50.

A good textbook on structural design. Chapter 11 titled "The Rigid Frame" is outstanding. The book is well illustrated and also contains an appendix listing the principal standards and specifications. A book of great merit.

Photography in Engineering, by C. H. S. Tupholme with Foreword by Richard F. Baker, Radio Corporation of America, RCA Laboratories Division. Chemical Publishing Co., Inc., New York. $6.50.

This book contains defailed data on engineering, research development and laboratory photography. There are numerous illustrations showing laboratory technique. Some of the subjects covered include: Photography of Drawings and Documents; Photography in the Laboratory; High-Speed Photography; Radiography, Microradiography; and Instructional Motion Pictures. A much needed book on an important subject.

Elements of Applied Hydrology, by Don Johnstone, Assistant Director, W. C. Kruger and Associates, Architects-Engineers, Inc., Los Alamos, New Mexico. Formerly Assistant Professor of Civil Engineering, The Ohio State University, Columbus, Ohio, and William P. Cross, Hydraulic Engineer, Water Resources Division, United States Geological Survey, Columbus, Ohio. The Ronald Press Company, New York. $5.00.

Hydrology is a new and rapidly growing science and but little covered in contemporary literature. The authors have compressed into 276 pages a textbook which leaves but little to be desired. Nature is a great laboratory and the writers made good use of it. Civil engineers can use this book to good profit.

Route Surveys, by Russell R. Skelton, Professor of Civil Engineering, University of New Hampshire; Member A.S.C.E. 1st Ed. McGraw-Hill Book Company, Inc. $4.50.

A well written book on Route Surveying embracing the latest practice and standards. Chapter 8, "Spiral Curves," and Chapter 13, "Construction Surveys," are very well done. There are several pages of problems and 295 pages of tables. A useful book even for practicing surveyors.

Extrapolation, Interpolation and Smoothing of Stationary Time Series with Engineering Applications, by Norbert Wiener, Professor of Mathematics, Massachusetts Institute of Technology. The Technology Press of M. I. T. and John Wiley & Sons, Inc. $4.00.

Written by the author of the well known book on Cybernetics, this book considers the statistical theory of time series. The text is highly technical but intensely interesting. Chapters III and IV covering filters for single and multiple time series are outstanding.

The Mathematics of Circuit Analysis, Extensions to the Mathematical Training of Electrical Engineers, by E. A. Guillemin, Professor of Electrical Communications, Department of Electrical Engineering, Massachusetts Institute of Technology. The Technology Press M.I.T. and John Wiley & Sons, Inc. $7.50.

A carefully written book covering also topics that have been given little attention heretofore. Researchers will find this work of great value. Electrical engineers specializing in electrical transmission will find this book of great help. Finally this book could well serve as a textbook on higher mathematics. A book that can be highly recommended.

Organic Syntheses. An annual Publication of Satisfactory Methods for the Preparation of Organic Chemicals. Vol. 28. John Wiley & Sons, Inc. $2.50.

Compiled by an editorial board with H. R. Snyder as Editor-in-Chief assisted by a large number of experts in the various fields. An outstanding reference book for chemical engineers and chemists.

CYLINDER WEAR IN DIESEL ENGINES

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